

Remarks

Claims 1-22 are pending in this application. Claims 1-22 are rejected. Claims 1, 11, and 20 have been amended. No new matter has been added. Applicants respectfully submit that the pending claims define allowable subject matter.

Applicants respectfully submit that no acknowledgment has been made of the Information Disclosure Statement submitted on October 25, 2004. Applicants respectfully request acknowledgment of the Information Disclosure Statement.

Applicants respectfully traverse the rejection of claims 1-22 under 35 U.S.C. 102(b) as being anticipated by Lian et al. (US Patent 5,804,969).

Lian et al. describes MRI coils having a decoupling capacitor that transfers a capacitive reactance between a plurality of coils and compensates for mutual inductance to reduce or eliminate signal and noise "cross-talk" between the coils when they are operated in close proximity (column 2, lines 54-58). Because of the decoupling capacitor, the coils need not be RF-shielded from one another or carefully positioned (e.g., overlapped) to reduce or eliminate mutual inductance (column 2, lines 58-61). The coils can also be decoupled by coupling a variable decoupling inductor between the coils (column 6, lines 35-37).

Claim 1, as amended, recites a coil system for a medical imaging system, the coil system comprising "a first coil of a medical imaging system; a second coil of the medical imaging system; and a balun device connected to the first and second coils, the balun device configured to decouple and prevent a current flow between the first and second coils of the medical imaging system."

Lian et al. does not describe or suggest a coil system as recited in claim 1. Specifically, Lian et al. does not describe or suggest a coil system including the balun device configured to decouple and prevent a current flow between the first and second coils of the medical imaging system. Rather, Lian et al. describes a decoupling capacitor that transfers a capacitive reactance between a plurality of coils that are electrically connected and compensates for mutual inductance to reduce or eliminate signal and noise "cross-talk" between the coils when they are operated in close proximity. A variable decoupling inductor coupled between the coils can also decouple the coils. Accordingly, Lian et al. does not describe or suggest the balun device configured to prevent a current flow between the first and second coils of the medical imaging system. Thus, Lian et al. fails to describe or suggest a coil system as recited in claim 1. For at least the reasons set forth above, Applicants submit that claim 1 is patentable over Lian et al.

Claims 2-10 depend from independent claim 1. When the recitations of claims 2-10 are considered in combination with the recitations of claim 1, Applicants submit that dependent claims 2-10 are likewise patentable over Lian et al.

Claim 11, as amended, recites a system for decoupling coils in a medical imaging system, the system comprising “balun means connected between coils of a medical imaging system for decoupling and preventing a current flow between the coils; and connection means for connecting the balun means to the coils.”

Lian et al. does not describe or suggest a system for decoupling coils as recited in claim 11. Specifically, Lian et al. does not describe or suggest a system including balun means connected between coils of a medical imaging system for decoupling and preventing a current flow between the coils. Rather, Lian et al. describes a decoupling capacitor that transfers a capacitive reactance between a plurality of coils that are electrically connected and compensates for mutual inductance to reduce or eliminate signal and noise "cross-talk" between the coils when they are operated in close proximity. A variable decoupling inductor coupled between the coils can also decouple the coils. Accordingly, Lian et al. does not describe or suggest balun means connected between coils of a medical imaging system for preventing a current flow between the coils. Thus, Lian et al. fails to describe or suggest a system for decoupling coils as recited in claim 11. For at least the reasons set forth above, Applicants submit that claim 11 is patentable over Lian et al.

Claims 12-19 depend from independent claim 11. When the recitations of claims 12-19 are considered in combination with the recitations of claim 11, Applicants submit that dependent claims 12-19 are likewise patentable over Lian et al.

Claim 20, as amended, recites a method for decoupling coils in a medical imaging system, the method comprising “configuring a balun for connection between coils in a medical imaging system to decouple and prevent a current flow between the coils.”

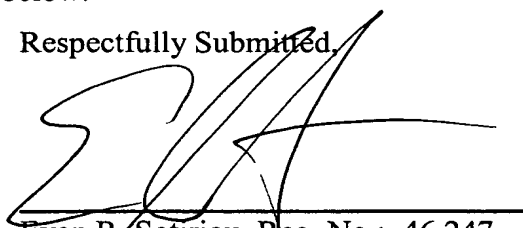
Lian et al. does not describe or suggest a method for decoupling coils as recited in claim 20. Specifically, Lian et al. does not describe or suggest a method including configuring a balun for connection between coils in a medical imaging system to decouple and prevent a current flow between the coils. Rather, Lian et al. describes a decoupling capacitor that transfers a capacitive reactance between a plurality of coils that are electrically connected and compensates for mutual inductance to reduce or eliminate signal and noise "cross-talk" between the coils when they are operated in close proximity. A variable decoupling inductor coupled between the coils can also decouple the coils. Accordingly, Lian et al. does not describe or suggest configuring a balun for connection between coils in a medical imaging system to prevent a current flow between the coils. Thus, Lian et al. fails to describe or suggest a method for decoupling coils as recited in claim 20. For at least the reasons set forth above, Applicants submit that claim 20 is patentable over Lian et al.

Claims 21-22 depend from independent claim 20. When the recitations of claims 21-22 are considered in combination with the recitations of claim 20, Applicants submit that dependent claims 21-22 are likewise patentable over Lian et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of claims 1-22 be withdrawn.

In view of the foregoing amendments and remarks, it is respectfully submitted that the prior art fails to teach or suggest the claimed invention and all of the pending claims in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'E. Sotiriou', is written over a horizontal line.

Evan R. Sotiriou, Reg. No.: 46,247
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070